#### Disclaimer

The document which accompanies this disclaimer is American Cyanamid's avian and aquatic risk assessments. The document presents the company's views. It does not represent EPA's views, which are posted separately at this homepage address. This document is being posted on the EPA homepage at American Cyanamid's request.

The reader may notice that several pages contain the statement "confidential." American Cyanamid has consented to the publication of this document, thereby waiving all claims that this document contains confidential business information.

# PIRATE®/ALERT® INSECTICIDE-MITICIDE: REGISTRATION APPLICATION AND TOLERANCE PETITION FOR CHLORFENAPYR ON COTTON (PP 5F4456)

Date Submitted //29/98

MRID No.

Volume: 3

Book 1 of 2

#### **STUDY TITLE**

An Avian Ecological Risk Assessment for Chlorfenapyr in Cotton

#### **DATA REQUIREMENT**

ΛΟ. . . . .

444779-01

Not Required Under 40 CFR158

Volume 1 of 2

#### **AUTHOR**

American Cyanamid Company

#### **STUDY COMPLETION DATE**

January 29, 1998

#### PERFORMING LABORATORY

American Cyanamid Company Agricultural Research Division P.O. Box 400 Princeton, NJ 08543-0400

#### **REPORT NUMBER**

CY190

Page 1 of 339

<sup>®</sup>Registered Trademarks of American Cyanamid Company

#### STATEMENT OF DATA CONFIDENTIALITY CLAIMS

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of FIFRA Section 10 (d) (1) (A), (B), or (C).

Company:	American Cyanan	nid Company		<del> </del>
Company Agent:	Zareen Ahmed	Date:	1/29198	
Product Registr Ti	ation Manager tle	=	Signature	FEZA

We submitted this material to the United States Environmental Protection Agency specifically under provisions contained in FIFRA as amended and thereby consent to use and disclosure of this material by EPA according to FIFRA. Notwithstanding the marking, "CONFIDENTIAL", this marking by itself conveys no supplemental claims of confidentiality under FIFRA sections 10(a) or 10(b). In submitting this material to the EPA according to the method and format requirements contained in PR Notice 86-5, we do not waive any protection or right involving this material (anywhere else in the world) that would have been claimed by the company if this material had not been submitted to the EPA.

# **Good Laboratory Practices Compliance Statement**

This volume is an avian ecological risk assessment submitted in support of this petition; there was no data collection directly associated with its preparation. Therefore, it was not conducted according to GLP regulations (40CFR 160).

Sponsor:

American Cyanamid Company

Submitter:

American Cyanamid Company

Company Agent:

Zareen Ahmed

Date: 1/29/98

Product Registration Manager

Title

Signature

# An Avian Ecological Risk Assessment for Chlorfenapyr in Cotton

American Cyanamid Company January 29, 1998

**CY190** 

#### CONFIDENTIAL

Page Number

106 108

109 111

112

114

#### **TABLE OF CONTENTS**

EXECUTIVE SUMMARY	7
BACKGROUND, FREATURES AND ORGANIZATION OF THE ASSESSMENT	10
PROBLEM FORMULATION	13
Stressor Characteristics	15
Ecosystems Potentially at Risk	23
Assessment Endpoints for Avian Risk	28
Measurement Endpoints for Avian Risk	28
Ecological Effects	31
Conceptual Model	31
Analysis Plan for This Risk Assessment	
Comments on the Problem Formulation Phase for	
Chlorfenapyr in Cotton	37
ANALYSIS	
Characterization of Ecological Effects/Hazard Assessment	40
Characterization of Environmental Exposure	55
Refined Conceptual Model(s)	81
Response Profile	95
Comments on the Analysis Phase for Chlorfenapyr in Cotton	96
RISK CHARACTERIZATION	98
Risk Estimation	99

Interpretation of Ecological Significance: Frequency of Exposure, Extent of Exposure, Importance of Exposed Areas Effectiveness of Label Mitigation Measures

5

Uncertainty Analysis Risk Description

SUMMARY AND CONCLUSIONS

REFERENCES

CY190

## CONFIDENTIAL

## Appendix Number

# APPENDICES

Labels for PIRATE Cotton Insecticide and	
ALERT Insecticide-Miticide	1
Mode of Action of Chlorfenapyr	2
Summaries of New Avian Toxicity Studies	3
Summaries of Ecosystem Characterization Studies	4
Bird Species and Biology Information	5
Summaries of Residues in Avian Food Items and Soil	6
Arthropod Populations in Cotton	7
Feeding Groups, Breeding and Migratory Information	
for Common Birds Observed in and Around Cotton Fields	8
Risk Quotients	9
Acreage of Pesticide Usage in Cotton	10
Tests for the Difference Between Two Kaplan-Meier	
Curves with Investigations of Power	11

6

CY190